

Application No. 10/581,245
Amendment dated January 28, 2010
Reply to Office Action of October 28, 2009

Docket No.: 4266-0122PUS1

AMENDMENTS TO THE DRAWINGS

Please substitute the attached Replacement Sheet, containing amended Fig. 2, for the corresponding original drawing sheet containing Fig. 2.

REMARKS

Claims 1-16 continue to be pending in this patent application.

In this paper, claims 1-16 have been amended. In particular, the claims have been amended to obviate the Examiner's objections, to obviate the rejection based on 35 USC § 112, second paragraph, and to eliminate unnecessary reference characters in the claims.

OBJECTIONS TO DRAWINGS

In this paper, Applicant has obviated the Examiner's objection to drawing figure 1 by amending page 7 of the specification as discussed below. The Examiner's objection to drawing figure 2 has been obviated by an amendment to figure 2 in which reference character 29, indicating a leftward pointing arrow, has been replaced with reference character 28. The amendment to drawing figure 2 is shown in the attached Replacement sheet. No new matter has been introduced by these amendments to the drawings.

In view of the amendments to the drawings and to the specification made herein, Applicant requests that the objections to the drawings be withdrawn.

AMENDMENTS TO SPECIFICATION

On page 7 of the specification, in the paragraph beginning on line 15, the last sentence has been deleted (to obviate the Examiner's objection to drawing figure 1, as discussed above). On page 12, in the last line, "29" has been changed to --28--, for agreement with the drawings and other passages in the specification. No new matter has been introduced by these amendments to the specification.

OBJECTIONS TO CLAIMS

The Examiner's objection to claim 1 have been obviated by adding --in-- after "produced" in line 5, as suggested by the Examiner. The Examiner's objections to claims 15 and 16 have been obviated by amending claim 15 to depend solely from claim 1.

The Examiner's objection to claim 12 has been noted. Per the guidelines provided in MPEP § 608.01(n) IV, the sequence of claim numbering is being maintained.

In view of the amendments to the claims made herein and in view of the foregoing observations, Applicant requests that the objections to the claims be withdrawn.

SECTION 112, 1ST PARAGRAPH, REJECTION

Claims 1-14 were rejected under 35 USC § 112, first paragraph, as failing to comply with the enablement requirement. Applicant traverses this rejection.

In the discussion that follows, Applicant has reproduced the headings used by the Examiner in the statement of the rejection.

The breadth of the claims and the nature of the invention

As described in the specification on page 8, line 30, through page 9, line 29, and on page 10, lines 24-37, fan 12 assigned to the heat-recovery device 11 produces an air flow through the dishwasher in a direction counter to the transporting direction of the wash ware 10, that is, toward the left as shown in drawing figure 1. This flow is augmented by the discharge from drying fan 19, especially when the exit nozzles of the drying fan are inclined to produce an air discharge having a larger leftward component 36 as shown in figure 3.

The level of one of ordinary skill

As clearly disclosed in the specification and drawings, the drying zone 7 is positioned upstream of the fan 12 assigned to the heat-recovery device 11 and will be subjected to a relatively low intake pressure of fan 12 at that location.

The level of predictability in the art

The curtains 13 effect separation, or screening, of the zones of the dishwasher from each other; they are not disclosed as sealing the zones from each other. Some air can flow past the curtains 13, as is made clear in the description. The air flow through the dishwasher may be impeded, but is not "blocked" by wash ware 10 moving through the dishwasher.

The state of the prior art

As explained above under the heading *The breadth of the claims and the nature of the invention*, the air flow produced by fan 12 will be augmented by the discharge from fan 19 when the exit nozzles of the drying fan are inclined to produce an air discharge having a larger leftward component 36.

The amount of direction provided by the inventor

Neither the U.S. patent statutes, nor the Rules of Practice, nor the guidelines provided in the MPEP mandate that working drawings or production specifications be provided in the disclosure of the invention in a patent application. Obviously, dimensions of intake gaps, cited by the Examiner, will vary, depending on, for example, the scale of the installation. Applicant submits that the written description, drawings, claims and abstract making up the disclosure of the invention in this application provide a clear disclosure of concepts and details of the invention that is more than sufficient to enable one of ordinary skill in the art to make and use the invention.

The quantity of experimentation needed to make or use the invention based on the content of the disclosure

Some experimentation would be expected in implementing the invention as disclosed in this application, but, as observed above, the disclosure of the invention is clearly sufficient to enable one of ordinary skill in the art to practice the invention, without "undue" experimentation.

In view of the foregoing observations, Applicant submits that the disclosure provided in this application fully meets the requirements of 35 USC § 112, first paragraph. Applicant therefore requests that this rejection be withdrawn.

SECTION 112, 2ND PARAGRAPH, REJECTION

Claims 7, 10 and 14 were rejected under 35 USC § 112, second paragraph, as being indefinite. Applicant traverses this rejection insofar as it might be deemed applicable to claims 7, 10 and 14 as now presented.

Claims 7, 10 and 14 have been amended to eliminate antecedent problems identified by the Examiner.

In view of the amendments to claims 7, 10 and 14 made herein, Applicant submits that the claims fully comply with the requirements of 35 USC § 112, second paragraph. Applicant therefore requests that this rejection be withdrawn.

PRIOR ART REJECTION I

Claims 1, 2, 7-9 and 11 were rejected under 35 USC § 103(a) as being unpatentable over US 4561904 (Eberhardt) in view of US 4336279 (Metzger). Applicant traverses this rejection.

Regarding the requirements of claim 1, on page 7 of the Office action, the Examiner acknowledges that Eberhardt "does not appear to explicitly/expressly disclose the exhaust air stream moving counter to the direction of the conveyor, where said stream is produced by regulated action in the drying and/or washing zone."

The Examiner cites Metzger as disclosing "a substrate drying apparatus (element 10 of figure 1) where the exhaust stream (air flow shown by arrow B and multiple internal arrows in figure I), flows counter to the direction of the conveyor (conveyor direction shown by arrow A in figure 1). Said stream is regulated by the action of a motor driven fan (element 28 of figure 1) and a controllable damper (damper action discussed in lines 36-40 of column 3). 26."

The Examiner contends, "At the time of the invention, it would have been *prima facie* obvious to one having ordinary skill in the art to modify the dishwasher of EBERHARDT to include the regulated counter exhaust stream of METZGER, since air flow moving counter to the conveyor serves to move air containing volatiles (such as water vapor) from areas of lower volatile concentration towards areas of higher volatile concentration, which facilitates increased drying action, as taught by METZGER (lines 29-44 of column 3)."

In Applicant's disclosed and claimed dishwasher, the air flow in the direction counter to the direction of the wash ware, realizes benefits that include movement of air from a warmer region to a cooler region in the dishwasher and preventing the escape of steam near the inlet and outlet of the dishwasher.

Element 120 in the Eberhardt dishwasher is disclosed as being an "outlet vent" that receives a flow of air propelled by blower fan 114 in the drying chamber 108 located adjacent to the exit end of the dishwasher. Without the fan 114, there would be no forced air flow through the dishwasher. Nevertheless, the Examiner proposes to fundamentally alter the architecture of the Eberhardt dishwasher so as to include a counter exhaust stream. The inspiration for this modification of the Eberhardt dishwasher comes from the Metzger patent, which discloses an apparatus and method for drying and curing coatings on substrates. The coated substrates lie flat

while being conveyed through the apparatus and cannot be reasonably likened to dish ware that proceeds through a dishwasher. Applicant submits that the invention disclosed by Metzger is so far afield of the dishwasher disclosed by Eberhardt that the teachings in Metzger would not be recognized by one of ordinary skill in the art as obviously applicable to the Eberhardt dishwasher. Moreover, the modification of the Eberhardt dishwasher proposed by the Examiner would, as suggested above, fundamentally alter the design and operation of the dishwasher, whereby the resulting dishwasher would not be recognizable as a dishwasher constructed according to the teachings provided by Eberhardt and would not perform as intended. Such a modification cannot be reasonably regarded as one that would have been obvious.

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Eberhardt and Metzger can properly serve as a basis for rejecting independent claim 1 or dependent claims 2, 7-9 and 11. Applicant therefore requests that his rejection be withdrawn.

PRIOR ART REJECTION II

Claims 3, 4, 6, 12 and 13 were rejected under 35 USC § 103(a) as being unpatentable over Eberhardt and Metzger and further in view of US 2003/0233767 A1 (Fratello et al.). Applicant traverses this rejection.

The Examiner acknowledges that Eberhardt and Metzger "do not appear to explicitly/expressly disclose the drying fan including pivotably designed exit nozzles."

The Examiner cites Fratello et al. for its disclosure of "a blower dryer for a carwash which includes a drying fan with a rotatable nozzle (abstract)."

The Examiner contends, "At the time of the invention, it would have been *prima facie* obvious to one having ordinary skill in the art to modify the dishwasher of EBERHARDT and METZGER to include the drying fan with rotatable nozzle of FRATELLO ET AL., since the directed nozzle serves to better push liquid particles toward the side or end of items being washed, thus enhancing the drying process as taught by FRATELLO ET AL. (abstract)."

As noted by the Examiner, Fratello et al. discloses rotatable nozzles *used in a car wash*. There is little reason to think that one of ordinary skill in the art would look to the car wash art for inspiration in the design of a dishwasher. Moreover, Fratello et al. offers no disclosure that

could remedy deficiencies in the proposed Eberhardt-Metzger apparatus vis-à-vis the requirements of parent claim 1, as pointed out above under the heading PRIOR ART REJECTION I. Applicant therefore submits that combining the teachings in Fratello et al. with the teachings in Ebverhardt and Metzger, as proposed by the Examiner, would not have been obvious and, even if the teachings were so-combined, no dishwasher resulting from such a combination could meet the requirements of Applicant's claims.

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Eberhardt, Metzger and Fratello et al. can properly serve as a basis for rejecting claims 3, 4, 6, 12 and 13. Applicant therefore requests that his rejection be withdrawn.

PRIOR ART REJECTION III

Claim 5 was rejected under 35 USC § 103(a) as being unpatentable over Eberhardt, Metzger and Fratello et al. and further in view of US 3598131 (Weihe). Applicant traverses this rejection.

The Examiner acknowledges that Eberhardt, Metzger and Fratello et al. "do not appear to explicitly/expressly disclose the dishwasher being operated without clouds of steam at the inlet and outlet. However, WEIHE discloses two steam collection systems for a dishwasher which prevent clouds of steam from being ejected at the inlet and outlet by pulling the steam into the heat recovery systems (lines 6-14 of column 3)." The Examiner adds, "At the time of the invention, it would have been *prima facie* obvious to one having ordinary skill in the art to modify the dishwasher of EBERHARDT, METZGER and FRATELLO ET AL. to include the steam collection systems of WEIHE, since these devices recover the heat of condensation and reduce the humidity in the dishwasher room, as taught by WEIHE (abstract)."

As argued above under the heading PRIOR ART REJECTION II, the teachings in Eberhardt, Metzger and Fratello et al. cannot make obvious the requirements of parent claim 4. Weihe provides no teachings that can remedy deficiencies in the Eberhardt, Metzger and Fratello et al. teachings vis-à-vis the requirements of claim 4. So, without acquiescing in the Examiner's proposal to combine the teachings in Weihe with those in Eberhardt, Metzger and Fratello et al., Applicant submits that no dishwasher resulting from such a combination could meet the requirements of claim 5.

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Eberhardt, Metzger, Fratello et al. and Weihe can properly serve as a basis for rejecting claim5. Applicant therefore requests that his rejection be withdrawn.

PRIOR ART REJECTION IV

Claim 10 was rejected under 35 USC § 103(a) as being unpatentable over Eberhardt and Metzger and further in view of Weihe. Applicant traverses this rejection.

Claim 10 depends from claim 1. For reasons made evident in the discussion above under the heading PRIOR ART REJECTION III, the disclosure in Weihe cannot remedy deficiencies in the disclosures in Eberhardt and Metzger vis-à-vis the requirements of claim 1. Therefore no dishwasher resulting from a combination of Eberhardt and Metzger and Weihe could meet the requirements of claim 10.

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Eberhardt, Metzger and Weihe can properly serve as a basis for rejecting claim10. Applicant therefore requests that his rejection be withdrawn.

PRIOR ART REJECTION V

Claim 14 was rejected under 35 USC § 103(a) as being unpatentable over Eberhardt, Metzger and Weihe and further in view of SE 9503485 A (Andersson). Applicant traverses this rejection.

The Examiner cites Andersson for its disclosure of "a ventilation control systemwhich utilizes a speed regulated fan." The disclosure in Andersson cannot remedy deficiencies in the disclosures in Eberhardt, Metzger and Weihe vis-à-vis the requirements of parent claim 1, for reasons made evident in the discussion above under the heading PRIOR ART REJECTION IV. Therefore no dishwasher resulting from a combination of Eberhardt, Metzger, Weihe and Andersson could meet the requirements of claim 14.

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Eberhardt, Metzger, Weihe and Andersson can properly serve as a basis for rejecting claim 14. Applicant therefore requests that his rejection be withdrawn.

ALLOWABILITY OF CLAIMS 15 & 16

Claims 15 and 16 were not treated on their merits in the outstanding Office Action. In view of the amendment to claim 15 made herein, Applicant requests that these claims be examined on their merits and found allowable, at least because of their dependence from claim 1, which is allowable for reasons presented above.

OTHER PRIOR ART

Applicant has considered the other prior art cited by the Examiner. Applicant is not commenting on this prior art, because it was not applied against the claims in this application.

CONCLUSION

In view of the amendments, observations and arguments presented herein, Applicant respectfully requests that the Examiner reconsider and withdraw the objections and rejections stated in the outstanding Office Action and recognize all of the pending claims as allowable.

If unresolved matters remain in this application, the Examiner is invited to contact Frederick R. Handren, Reg. No. 32,874, at the telephone number provided below, so that these matters can be addressed and resolved expeditiously.

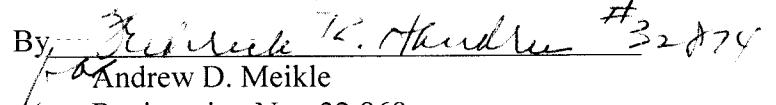
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17, particularly, extension of time fees.

Dated: January 28, 2010

Respectfully submitted,

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Attachment: Replacement Sheet (Fig. 2)